

Remarks

It is first noted that in the Interview Summary, box i) was not checked by the Examiner. This is believed to be an oversight because the Examiner's statement of the substance of the interview is quite complete and no issues other than the timing of the finality of the rejection were discussed. The Examiner is requested, for completeness of the record, to confirm that no further record of the interview is required from the applicant.

The objections to the specification are overcome. The objected to text on page 4 is overcome by deletion of the text. The description of the claimed invention is not thereby impaired.

The claimed collection or capturing mechanism is the system component directly interacting with the natural energy and driven into movement thereby. Such mechanisms are well known. In applicants' illustrative embodiment, the mechanism is the float 10. In Syverson, it is propeller 28.

Claims 9 - 20 are cancelled and replaced with claims 21 - 31 for more definitely defining the invention.

In general, the claims are directed to a method of operating a system including continued operation thereof during conditions of excessive input energies likely to cause damage to the system. Rather than shutting down the system, the system, in effect, is made "stiffer" against excessive movements otherwise caused by the excessive input energy. Additionally, all the claims now specify varying the load impedance by a variable amount dependent upon monitored operating conditions.

The claimed invention, while making use of known technology, is directed to an inventive combination providing a novel result. The prior art cited by the Examiner shows individual aspects of the claimed technology, but not the claimed combinations.

The Examiner recognizes that Syverson does not disclose that the mechanical impedance of the generator is controlled. In addition to this, however, nothing in Syverson shows or suggests the claimed process of decreasing the electrical impedance of the load by a variable amount dependent upon the measured amount of movements for protecting the system against damage while continuing to generate power. Syverson shows simply the inclusion of a resistor of fixed value not related to the level of any dangerous condition, hence not selected with regard to continuous operation. ✓

In Mikhail et al, the generator torque (an internal parameter of the generator), rather than the load impedance (an external parameter), is controlled. Accordingly, the combination of Mikhail et al with Syverson, as suggested by the Examiner, does not appear to be justified by the references themselves. Also, the purpose in Mikhail et al is not for protecting the system from damage due to excessive winds, but for providing optimum or constant power output in response to variable wind speeds. Thus, when Mikhail et al refers to variable wind speeds, reference is not being made to excessively and possibly damaging high speeds, but simply to expected wind gusts, not dangerous to the system, but simply outside the range of wind speeds with which the system is designed to operate. Only applicants' claimed invention addresses the problem of continuous operation during potentially system damaging conditions, and only applicants' claim an impedance reduction which is a function of excessive system movements. ✓

Combining Mikhail et al with Syverson, therefore, still does not provide or suggest the claimed method for protecting the system against potentially damaging input energies while continuing to generate power.

New claim 29 specifies monitoring the rate of change of the amount of movement; see specification, page 7, full paragraph. New claim 30 specifies multiple sampling of individual waves; see top of page 6. New claim 31 specifies

repeated monitoring and load impedance decreasing steps; see, beginning at the bottom of page 6 through the top of page 7. Neither cited reference, alone or in combination, shows or suggests this claimed subject matter.

Entry of the specification amendments and allowance of the application are respectfully requested.

Respectfully submitted,

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Marked-up Amended Specification Paragraphs

Amended paragraph beginning at the bottom of page 3 through line 8 of page 4:

“[This] The disclosed [innovation] invention prevents system damage due to storms, while still producing power, by adjusting the impedance of the system from the optimum system efficiency values to high levels that impede the production of large motions or speeds. The technique for system impedance adjustment is to vary the electrical load of the electric power generator. These higher levels of system impedance do not just absorb the natural energy less efficiently, they greatly reduce the conversion efficiency of the natural energy converter. [This reduction in natural energy conversion efficiency can easily be a factor of ten.] This greatly reduces the level of mechanical energy delivered to the drive system and prevents damage. This disclosed system is intelligent [only] and reduces [the] overly high energy available to acceptable levels while continuing to generate useful power.”

Amended paragraph beginning at the bottom of page 6 through line 6 of page 7:

“To provide intelligent control of the over-stroke protection technology, a sensor (e.g., shown as 80 in the drawing) is needed to detect the position of the stroking section of the energy converter. In the case of a rotary driven device such as a turbine, a sensor that measures speed is needed[.]; for a linearly driven device, e.g., an hydraulic cylinder, a cylinder piston [pivoting position] sensor is needed. Such sensors would normally be present in known power generating systems to provide operational information and, for use with the present invention, the outputs from such sensors are also communicated to the over-stroke controller. In a simple control strategy, an over-stroke control

computer 22 constantly monitors the stroke position or system rotary speed and does not take action unless the measured values exceed a pre-selected value. When the [stoke] stroke position or rotary speed exceeds the pre-selected value, the over-stroke controller significantly increases the system impedance. If the next sensor readings are still too high, the impedance is again increased. This procedure is repeated until the sensor readings are within the acceptable range. If the rotary speed or position does not increase, the over-stroke control returns to the monitoring mode and the regular (known) power conversion circuit continues to operate the system."